Table 3.3-3. Current Water Quality Conditions and Trends in Landusky Drainage Basins

Drainage	Area Summary	Station Type	Current Conditions	Trends				Remarks
				pH	Alkalinity	Sulfate/SC	Metals	
Sullivan Gulch	Above capture system	Source	3	-	-	+	+	Alluvial and bedrock groundwater contaminated
	Below capture system	Down-gradient	2NM	sl +	sl +	sl +	stable to sl +	Station D-4, above Rock Creek
Rock Creek	Sullivan to Mill Gulch	Down-gradient	2NM, 2L	stable	stable	stable	no trend- low	
	Below Mill Gulch	Down-gradient	4	stable	stable	+	no trend	
Mill Gulch	Rock dump to capture system	Source	3	- to stable	- to stable	+ to stable	+	Capture system moved and deepened in late 1997
	Below capture system	Down-gradient	2NM/3	sl + to stable	stable to sl +	-	no trend, low	
Montana Gulch	Mine area/pits	Source	3, 2M	-	- to no trend	+	+	Gold Bug and L-38 declining quality WS-3 non-ARD, stable- slight decline
	Lower leach pads	Down-gradient	3	stable	sl +	+	no trend, variable	Mine impacts due to cyanide, metals and elevated sulfate
	Below mine	Down-gradient	4	stable	stable	+	no trend variable	Trends affected by Gold Bug and Landusky water treatment plant
Swift Gulch	Mine area/pits	Source	3/2M	-	sl -	+	no trend sl +	ARD impacts to shallow groundwater
	Creek	Down-gradient	2M, 2NM	stable	sl -	0	elevated Fe, Mn, and Zn	Increasing trend of neutralized ARD parameters since 1998. Water quality is mix of unmineralized, natural mineralized and mine-impacted waters.
King Creek	Headwaters rock dump	Source	4	stable	stable	+	+	
	Near Reservation	Down-gradient	2NM/4	stable	stable sl +	stable	no trend- stable	Improving water quality- increasing alkalinity, declining metals, nitrate

Current Conditions: 1=Headwaters Background; 2M=Mineralized Syenite Background; 2NM=Non-Mineralized Syenite Background; 2L=Limestone Background; 3=Mine/ARD Impacted; 4=Neutralized ARD; 5=Various Mine-Related Indicators. Trends: + increasing; - decreasing; sl=slight